

Amendments to the Claims

Please cancel claims 1-8 without prejudice. Please add new claims 9-28 as shown below in the List of Claims.

List of Claims

1-8. Cancelled.

1 ~~9~~. (New) A process for obtaining a purified gas by removing polysulfanes from crude gas formed during the production of hydrogen sulfide, comprising:

- a) passing said crude gas through a wash system where said crude gas is brought into contact with a wash solution comprising water or methanol; and
- b) collecting said purified gas from the wash solution of step a).

2 ~~10~~. (New) The process of claim ~~9~~¹, wherein said crude gas comprises greater than 80% by volume of H₂S and 100-2000 vpm of polysulfanes of the formula H₂S_n, wherein n = 2-8.

3 ~~11~~. (New) The process of claim ~~10~~², wherein said polysulfanes are present in said crude gas at 400-1500 vpm.

4 ~~12~~. (New) The process of claim ~~9~~¹, wherein said wash system is a jet washer.

5 ~~13~~. (New) The process of claim ~~9~~¹, further comprising a second wash step in which the purified gas produced in step a) is passed through a counter-current washer comprising an aqueous or methanolic solution.

6 ~~14~~. (New) The process of claim ~~9~~¹, further comprising a second wash step in which the purified gas produced in step a) is passed through an adsorber bed.

7 ~~15~~. (New) The process of claim ~~9~~¹, wherein relative to said crude gas, the polysulfanes in said purified gas have been reduced by 50-99.5%.

- 8 ~~16~~. (New) The process of claim ~~9~~¹, wherein said process is carried out at a temperature of 0-150°C.
- 9 ~~17~~. (New) A process for obtaining a purified gas by removing polysulfanes from crude gas formed during the production of hydrogen sulfide, comprising:
- a) passing said crude gas through a wash system comprising an aqueous or methanolic solution containing 0.5-20 wt% of an alkali or alkaline earth hydroxide or oxide; and
 - b) collecting said purified gas from the aqueous or methanolic solution of step a).
- 10 ~~18~~. (New) The process of claim ~~11~~⁹, wherein said crude gas comprises greater than 80% by volume of H₂S and 100-2000 vpm of polysulfanes of the formula H₂S_n, wherein n = 2-8.
- 11 ~~19~~. (New) The process of claim ~~18~~¹⁰, wherein said polysulfanes are present in said crude gas at 400-1500 vpm.
- 12 ~~20~~. (New) The process of claim ~~17~~⁹, wherein relative to said crude gas, the polysulfanes in said purified gas have been reduced by 50-99.5%.
- 13 ~~21~~. (New) The process of claim ~~17~~⁹, wherein said wash system is a jet washer and said process further comprises a second wash step in which the purified gas of step a) is passed through either: a counter-current washer comprising an aqueous or methanolic solution; or an adsorber bed.
- 14 ~~22~~. (New) A process for obtaining a purified gas by removing polysulfanes from crude gas formed during the production of hydrogen sulfide, comprising:
- a) passing said crude gas through a wash system comprising an aqueous or methanolic solution containing 1-20 wt% of a compound selected from the group consisting of:

- i) an organic amine of the formula $(C_nH_{2n+1})_xNH_y$, where $n = 1-3$, $x = 2$ or 3 , and $y = 0$ or 1 ;
 - ii) an amino alcohol of formula $(C_nH_{2n+1}O)_xNH_y$, where $n = 1-3$, $x = 2$ or 3 , and $y = 0$ or 1 ; and
 - iii) ammonia;
- b) collecting said purified gas from the aqueous or methanolic solution of step a).

15 ¹⁴ 23. (New) The process of claim 22, wherein said compound is an organic amine of the formula $(C_nH_{2n+1})_xNH_y$, where $n = 1-3$, $x = 2$ or 3 , and $y = 0$ or 1 .

16 ¹⁴ 24. (New) The process of claim 22, wherein said compound is an amino alcohol of formula $(C_nH_{2n+1}O)_xNH_y$, where $n = 1-3$, $x = 2$ or 3 , and $y = 0$ or 1 .

17 ¹⁴ 25. (New) The process of claim 22, wherein said compound is ammonia.

18 ¹⁴ 26. (New) The process of claim 22, wherein said crude gas comprises greater than 80% by volume of H_2S and 100-2,000 vpm of polysulfanes of H_2S_n , where $n = 2-8$.

19 ¹⁴ 27. (New) The process of claim 22, wherein relative to said crude gas, the polysulfanes in said purified gas have been reduced by 50-99.5%

20 ¹⁴ 28. (New) The process of claim 22, wherein said wash system is a jet washer and said process further comprises a second wash step in which the purified gas of step a) is passed through either: a counter-current washer comprising an aqueous or methanolic solution; or an adsorber bed.